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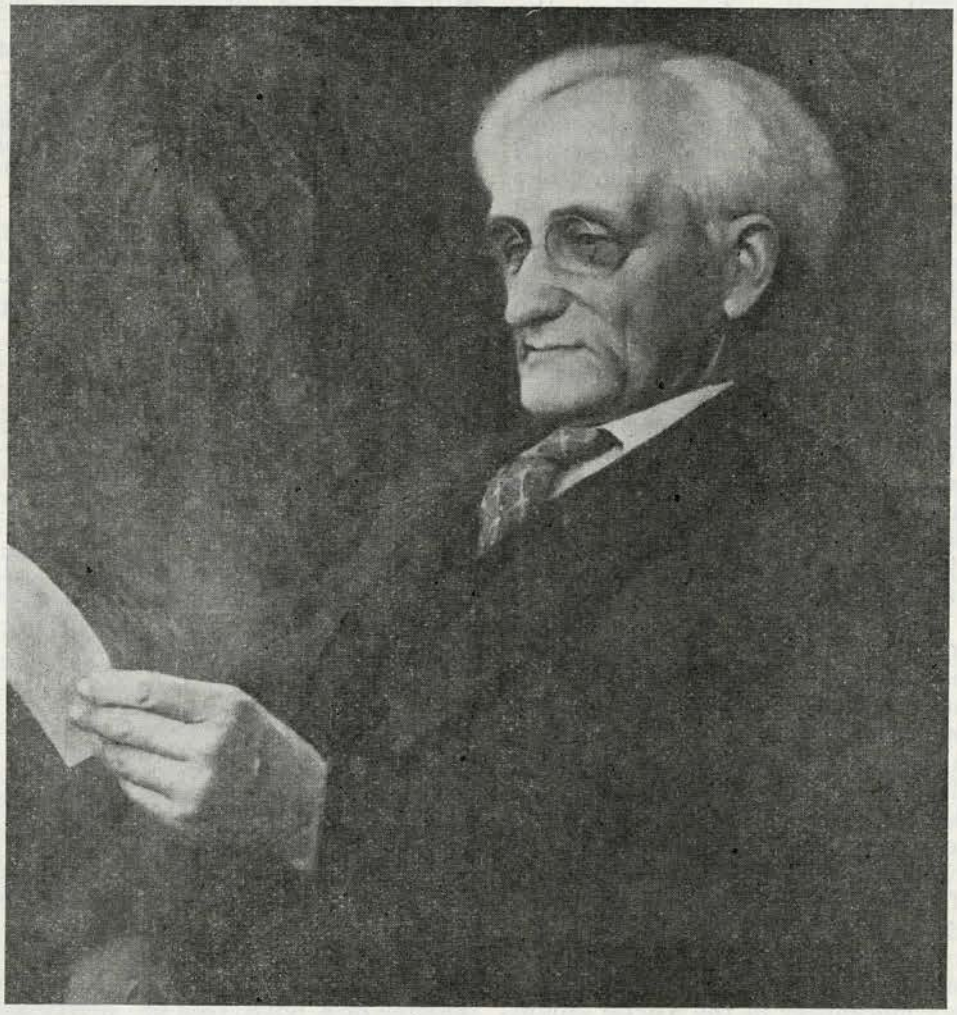

Dr. Liberty Hyde Bailey. (See Dr. Waldron's article on Page 42)

NORTH DAKOTA HORTICULTURE SOUTH DAKOTA

Mar. 1944

Vol. XVII March, 1944 No. 3

MERGANSERS

By

O. A. Stevens

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Every duck hunter knows the "fish ducks." They are also known as goosanders and sheldrakes. They are not esteemed for game on account of their fishy diet. The name sheldrake is also applied to an European bird closely related to the Muscovy duck. There are eight known species of mergansers. They form a special group, distinguished from other ducks by the narrow, nearly cylindrical bill which is hooked at the tip and has stout teeth along the edges, whence the name "sawbill."

Three species are widely distributed in the northern parts of North America. A fourth, the smew, has been found once or twice as a straggler of Europe. Three species occur in China, Brazil and the Auckland Islands, respectively. The eight is the torrent duck, found in swift mountain streams of South America. The American merganser is regarded as a race of a European species, a third form of which occurs in central Asia. The red-breasted merganser is found all around the world, the hooded merganser only in North America and the smew in Europe and Asia.

The American merganser is regarded by some as one of the handsomest of ducks. Their white under parts are buffy or pinkish. The male has a green head, bluish back and partly white wings. The female has a brown head with white cheeks, the back grayish with crossbar markings. The male hooded merganser also has a green head and a conspicuous crest of feathers of different lengths. The neck has a white ring, below which is a brown band and black spots in streaks. The female lacks the white cheeks of the other species. Both of these have red bills.

The hooded merganser is a little smaller. The male has a white breast and brownish sides, black back and head, but a large, rounded crest which is largely white in side view. The female is mostly brown, the brown sides and wings distinguishing her from the females of the other two species.

The hooded merganser nests in the Dakotas. The other two species range further north and inhabit wooded areas. Norman Wood found nests of the American merganser in the Turtle Mountains and at Devils Lake in 1921. Dr. Roberts reports them in Minnesota chiefly in the Lake Superior region, though they formerly nested in the southern part of the state.

There apparently are no nesting records of the red-breasted merganser for North Dakota, though occasional birds are seen in migration. Dr. Roberts reports that a few nest in northern Minnesota. Their nests are placed near the water, often under shelter of a bush, tree or driftwood. The eggs number from 8 to 10, sometimes as many as 16.

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NEWSLANTS

By

Harry A. Graves

H. A. Graves

Mr. A. L. Truax writes from Crosby, North Dakota that he will try to attend our June meeting at Trutle River State Park. Mr. Truax is a past president of the North Dakota Society and a true horticulturist. President Paul Owens of Grand Forks also believes that such an afternoon and evening session will be worth while. We hope and plan T. M. McCall, J. M. Wampole, and Melvin Bergeson, of Crookston and Fertile, Minnesota will be able to come also. This is an open letter to W. R. Leslie and his co-workers to make this June get-eogether a part of a sortie to the south.

Brother Simmons makes more space available in the magazine, and what happens? All the old correspondents just become more "verbose". I shall try to keep within the customary page this week.

Yeager is still at it! A recent trade publication carriers the following paragraph: "A by-product of Dr. A. F. Yeager's tomato breeding program was dwarf determinate type of plant with small fruits. These little tomato plants have been finished in 5 and 6-inch pots to make enteresting novelties for Christmas. In spite of dark weather during the fall of 1943, fruit set was good. Timing information will be completed with a group of plants that are now beginning to fruit. Although not quite true at present, this tomato will be trued up soon enough to grow a quantity of seeds in the field this summer. Anyone wishing seeds of this novelty tomato with timing information should send a request to Dr. Yeager." A Fargo greenhouse is growing plants of this variety. I gave them some seed the Dr. sent me and they furnish the glass.

The premium list should have reached you 'ere this. Some of you will want to try the things new and others not so new but still new to many gardeners who are not familiar with them. Please note that the premium list closes on **April 1.** This is to enable the folks supplying some of the items a chance to get them out before their stock is exhausted.

Elmer Reeves wonders in the Febraury issue how I grow my cauliflower. I don't grow it very well. I think he must have in mind the reference to C. L. Benzi's fine cauliflower in an earlier issue. I don't know how Charlie grows it, but I have seen the evidence! I have never seen better anywhere.

DeWayne Torgeson, of Ambrose, reports on his tomato results in 1943. Victor and Bounty behaved very satisfactorily, but very similar. Chatham (Mich. 4502) was earlier than either but not so large or nice as Bounty or Victor. Orange King was on the late side but juice of this veriety was favored over all others. Red Warba, Pontiac, and Kasota potatoes from last year's premium list were grown. Warbo does well for a good small early. Pontiac vines continued green until frozen down, but had good, large tubers. Kasto did poorly. The Torgesons made rather extensive planting in their yard in 1943.

A Regional Victory Garden Conference in St. Paul in mid-February gave an opportunity to renew acquaintances with the Minnesota Horticultural crowd.—Alderman, Hunt, Wilcox, Weir, Hutchins and recent past president of the Minnesota Horticultural Society, Benj. Dunn of Rochester. Ben and I had an especially good visit until near midnight. As you might expect, Horticultural Societies and their many angles came in for their share. Formal and informal comments at the conference indicated that the need for gardens is still with us. In spite of stories that canned vegetables are to be removed from the ration list—civilians are to have a few million cases of canned vegetables less this year.

1944 PREMIUM LIST

S. D. STATE HORTICULTURAL SOCIETY

Annual members are entitled to receive one premium in the tree, plant or bulb line or two of the seed offerings. Life members who have joined in the past six years and who did not take their full quota of premiums at the time, are also entitled to an annual premium. Please make your selection before May 1st. Our good friends the Nurserymen are donating many of these premiums; others we buy from the Horticultural Department of State College, Brookings. When in the market for nursery stock, it will pay you to deal with the firms making these offerings, and our advertisers.

FRUIT AND ORNAMENTAL PLANTS FROM THE HORTICULTURAL DEPT., SOUTH DAKOTA STATE COLLEGE

One to Each Premium

APPLES AND CRABAPPLES

All the apples are grafted on hardy Siberian roots and most are two years old. These were propagated for planting in the "Hansen Foundation Orchard" and are a surplus of that material. It may be necessary to substitute since the supply is small. Please state a second choice or permit us to make a selection. As these have been described in Station Bulletin, no description is given here.

Alexis crab
Almata apple
Amsib crab
Amur crab
Andrew Wild crab
Ann Trio crab
Anoka apple
Beauty crab
Ben Trio crab
Bismer crab
Cal Trio
Caputa crab
Carmel
Cathay
Chance
Chinook crab
Dan Trio crab
Dolgo crab
Duchess apple
Elk River
Elta apple
Erl Trio crab
Fay Trio
Forest King Wild crab
Giant Wild crab
Goldo apple
Hans Trio crab
Ivan crab
Izo crab
Joe Trio crab
Kazan apple
Keo crab
Kit Trio crab
Kala crab
Kazan apple
Lee Trio crab
Lemon
Lina
Linda Sweet
Lubsk Queen
Max Trio
Macata crab
Maga
McIntosh
Mercer Ung. Wild crab
Nana
Nebo apple
Nevis
New Duchess
Olga crab
Redflesh crab
Red Silver
Red Tip Wild crab
Sasha apple
Selma
Serada apple
Soulard
Sugar crab
Sweet Russet crab
Tipi
Tolmo
Tolsteme
Volga apple
Wakaga crab
Wakoga crab
Wakpala crab
Wamdesa crab
Wanblee crab
Watopa crab
Waubay crab
Waziya crab
Wecota crab
Wetonka crab
Whitney
Wiyuta crab
Wolf River
Watanda crab
Yellow Siberian crab
Yellow Sweet
Yellow Transparent
Zaza crab
Zelma
Zapta
Zita
S. D. Ben
S. D. Bison
S. D. Bona crab
S. D. Eda
S. D. Milo
S. D. Jonsib crab
SS. D. Waldo crab
S. D. Wendal
S. D. Winter crab
K5248—No. Calyx crab

PEARS

Finland pear
Finsib pear
Finsib Sister pear
Ilya pear
K5180 pear
Krylov pear
Ming pear
Nikto pear
Okolo pear
P. Simoni Ovoidea pear
Russian Sandpear
Selenga pear
Selo pear
Sladky pear
Sinensis pear
Sungari pear
S. D. Valya pear
Tanya pear
Ussuri pear
Yermak pear
7145 pear

CHRYSANTHTMUMS—Developed by Dept. of Hort.

These plants are from Korean hybrid seedlings from which we have made selections over a five-year period. Those offered represent the best of the lot. They are semi-hardy but in most cases it is well to either plant them in a pot and plunge it in the ground or lift them from the garden in fall before frost, and grow them for blossoms inside.

A-236—Chrysanthemum
Habit of growth—compact, oval, 18"
Flowering habit—close, peduncles long, slender
Time of bloom—Oct. 22, 1941
Size of flowers—2-2½"
Length of rays—1-1⅛"
Color—rosy magenta
Single
Color of disk—yellow ochre

A-238—Chrysanthemum
Habit of growth—dwarf, 15', open
Flowering habit—peduncles short, stout, clustered
Time of bloom—Oct. 20
Size of flowers—1¾
Length of rays—¾"
Color—violet rose, striped, light margin, fading to light
Semi-double (3 rows)
Color of disk—yellow ochre

A-239—Chrysanthemum
Habit of growth—tall, 21", spreading, heavy top
Flowering habit—peduncles long, slender, many bloom
Time of bloom—Oct. 18, 1941
Size of flowers—1½-2"
Length of rays—¾"
Color—violet rose, white ring at base
Semi-double—single
Color of disk—yellow ochre

A-240—Chrysanthemum
Habit of growth—22", sparsely branched
Flowering habit—peduncle medium 3-5 in. cluster, open top
Time of bloom—Oct. 22, 1941
Size of flowers—2½"
Length of rays—1-1⅛"

Color—shrimp pink-coral red
Single—semi-double
Color of disk—yellow ochre

A241—Chrysanthemum
Habit of growth—slender, 17"
Flowering habit—close, long peduncles, even
Time of bloom—Oct. 18, 1941
Size of flowers—1¾-2"
Length of rays—¾-1"
Color—creamy white
Single
Color of disc—yellow ochre

A-242—Chrysanthemum
Habit of growth—23", slender
Flowering habit—peduncles long, slender
Time of bloom—Oct. 23, 1941
Size of flowers—2-2½"
Length of rays—¾-1"
Color—shrimp pink, coral red
Single
Color of disc—yellow ochre

A-243—Chrysanthemum
Habit of growth—29", slender, spreading-upright
Flowering habit—semi-clustered, peduncles medium
Time of bloom—Oct. 20, 1941
Size of flower—2-2¼"
Length of rays—1"
Color of rays—white 2-3 rowed
Color of disc—yellow ochre

A-244—Chrysanthemum
Habit of growth—open top, 18", erect
Flowering habit—open, peduncles long
Time of bloom—Oct. 20
Size of flowers—2¼-2½" Length of rays—1-1⅛
Color—white, some flowers rose Single
Color—yellowish green

A-245—Chrysanthemum
Habit of growth—open, straggly
Flowering habit—corymbose Time of bloom—Oct.
Size of flowers—2-2¼" Length of rays—1"
Color—sulphur yellow Single
Color of disk—yellow ochre

A-246—Chrysanthemum
Habit of growth—very compact, 13", dometop
Flowering habit—peduncles many, medium close
Time of bloom—Oct. 18, 1941
Size of flowers—1¾" Length of rays—¾"
Color—violet rose Almost double—4-5 rows
Color of disk—yellow ochre to greenish

A-247—Chrysanthemum
Habit of growth—low, 1", spreading, compact fairly
Flowering habit—peduncles slender, many open
Time of bloom—Oct. 20, 1941 Size of flowers—2"
Length of rays—1"
Color of rays—violet rose Double—7 rows
Color of disc—small green

A-248—Chrysanthemum
Habit of growth—27", open, erect
Flowering habit—clusters, short peduncles
Time of bloom—Oct. 23, 1941
Size of flowers—3-3¼" Length of rays—1¼-1½"
Color—Indian yellow fading to lemon yellow Single
Color of disc—large—yellow ochre

A-249—Chrysanthemum
Habit of growth—21", cylindrical, oval
Flowering habit—compact, peduncles long, slender
Time of bloom—October 23, 1941
Size of flowers—2¼" Length of ray—1"
Color of rays—rose magenta Single
Color of disc—yellow ochre

A-250—Chrysanthemum
Habit of growth—very compact, dome-shaped
Flowering habit—close, peduncles long, slender
Time of bloom—Oct. 24, 1941
Size of bloom—2" Length of ray—¾"
Color—violet rose 1-2 rowed
Color of disc—yellow ochre

A-252—Chrysanthemum
Habit of growth—upright open, 19"
Flowering habit—clustered, peduncles medium, short
Time of bloom—Oct. 23, 1941
Size of bloom—2" Length of ray—¾"
Color—sulphur yellow flecked with red orange
2-3 rowed Color of disc—geenish

A-253—Crysanthemum
Habit of growth—upright, compact, 20"
Flowering habit—close, peduncles long, slender
Time of bloom—Oct. 24, 1941
Size of bloom—1¾-2" Length of ray—¾"
Color—white Double—5-6 rows
Color of disc—small, yellow ochre

PLUMS—All on Sandcherry Seedling

Oacoma Plum—Opata Plum—Teton Plum—Sapa Plum—Wastesa Plum—Yuteca Plum

APRICOTS

Apricot No. 509 No. 1—On Mixed Manchu Apricot

AMARYLLIS

Various colors—ranging from deep red to greenish white. State color desired.

TATARTIAN HONEYSUCKLE

Selected for best plants showing much variation in color of fruit. Very vigorous growers.

J. B. TAYLOR, Ipswich, S. D.

Seed of Giant Zinnia and Bounty tomato

H. N. DYBVIG, Colton

No. 1—2 bulbs Lillium Amabile
No. 2—4 bulbs Concolor Lily
No. 3—5 Tenuifolium (Coral)
No. 4—2 Double Tiger
No. 5—2 Single Tiger
No. 6—2 Pembina, the edible highbush cranberry

GATES NURSERY, Rapid City

3 two-year-old Caragana Pygmia
3 large Ponderosa pine seedlings
1 three-year-old native Sandcherry

Peat-bog moss is today grown under the guidance of botanists as a raw material for the making of surgical dressings. Processing the moss is relatively simple. First, it is carefully cleaned of all extraneous matter, then dried, steam sterilized and formed into gauze-covered pads of various sizes. Wounds heal much more quickly with moss than with cotton bandages because of better drainage and its antiseptic properties. Moss bandages are today being utilized by the Allies in the many war theaters of the world.—Capper's Farmer.

MANITOBA NEWS LETTER

By
W. R. Leslie

W. R. Leslie

The winter of 1942-43 was a heavy and long one. Severity of winter was widespread. Dr. A. F. Yeager, Head Department of Horticulture, University of New Hampshire, at Durham, sent the following comments to the Morden Station: "Winter injury is somewhat different this year than other years. We had more severe cold last winter than usual, nevertheless some of those plants which ordinarily winter kill showed no damage, and others which we would expect to have a lot of hardiness were badly damaged. Apparently the hardiness problem is still something of a puzzle."

The observations of our old friend, who contributed so many valuable new hybrid fruits and vegetables during his sojourn as Professor of Horticulture at the North Dakota Agricultural College, coincides with the surprisingly inconsistent behavior of woody plants on the prairies that season.

The Manitoba year is marked into four seasons, more or less clearly defined. Each possesses its own peculiar charms. On the Morden Experimental Station, winter bird life is a keen delight. The whole square mile of scenery is made more alive and interesting by the feathered friends.

When the wild geese and ducks were to be brought from the water dugout reservoir in November to winter quarters in the farmyard, four of the young black ducks took wing and parted company from their fellows. Two may have joined a migrating flock and journeyed to the lower Mississippi. The other pair located their kindred and when the gate was opened ambled serenely in to their unconcerned parents. In June one brood of ten black ducklings disappeared in one night. Another brood of six were unharmed. A blue goose gosling of considerable size also vanished. No remains were found. It is an example of the frequent tragic drama of wild life. Weasels may know the secret. This agile little animal is esteemed for his success upon the troublesome mice.

Chukar partridges wintered well and had good hatches. These are the most talkative birds on the estate. Their sociability and self--assurance, although appealing to visitors, proves their undoing once they clear the home fence in hunting season. They are considerably larger and more colorful than Hungarian partridges, but eager hunters seem to mistake them.

Snow buntings were numerous in November. They drifted nervously here and there along the driveways but in a couple of days had moved on. A group of 16 Canada jays spent a couple of weeks on the station. Their showier cousins, the Blue jays, are numerous, noisy and stayers. Their gruff effort at song is appreciated when snow blankets the earth and most trees are gaunt and bare. An occasional woodpecker adds variety. Pine Grosbeaks have been scare this season. The charming active chickadees have returned and are destroying insect egg masses, as well as pleasing eye and ear of the wayfarer. Juncos tarried longer than usual but departed before heavy cold set in. A large flock of about 130 starlings showed up in mid-December. Strangely, but fortunately, former flocks which came in early winter weeks have always disappeared before the snowdrifts melt in spring.

Rabbits are at low ebb. Mice are less numerous than usual. This scarcity of rodents probably accounts for the relative small numbers of winter hawks and owls.

The potato crops commands more attention than usual this season. With the scarcity of canned vegetables, home grown produce that is easily stored gains in importance.

At present about a dozen varieties of potatoes are grown in Manitoba in fair quantities, and many others in small quantities. Irish Cobblers make up over 80% of all potatoes grown and, while far from perfect, it is at least most popular. Its main weakness is deep eyes, roughness and often hollow heart. Other varieties, extensively grown and popular in certain localities, are Green Mountain, Early Ohio, Netted Gem, Warba and Chippewa. Green Mountain is a high quality white potato usually faulted locally as being too late. Early Ohio is a light red, oblong tuber of good cooking quality, often crack badly and is prone to start a second growth in late summer. Netted Gem, an oblong netted, white tuber, is one of the potato aristocrats when grown on deep sandy loam soil with abundant moisture. It is highly esteemed in the irrigation areas of Alberta. Warba is white with pink eyes and of good cooking quality but, like Irish Cobbler, has deep eyes and tends to roughness. Warba is one of the earliest commercial potatoes. Chippewa is white, smooth and good cooking quality. It is faulted for being subject to disease and a poor keeper. Katahdin, Houma and Sebago are new varieties introduced from the United States, which are being tested extensively. Houma is par-

(Continued on Page 47)

GARDEN CLUB GLEANINGS

By
Mrs. G. M. Jorgensen

Mrs. Jorgensen

Spring is almost upon us. How lovely it would be this year, if every Garden club in South Dakota would organize a Junior Garden club. The entire project is of inestimable value in spreading community interest. Plans should be made early in March at a meeting of teachers and sponsors for Junior club programs, for boys and girls in the 5th and 6th grades. Awards are made to the boy and girl who produces the best garden. I might say right here, it is well to remember that the child is made up as a human being, is a more important element in his future than his present abilities. Boys might be required to plant carrots, beets, beans and onions in a garden plot 7x9. Girls might plant portulaca, purple petunia and marigold, or ageratum, verbena and zinnia. Each child participating pays 10 cents for seeds for one garden. The seeds are bot in bulk and divided into small packages for distribution. The Juniors may meet every two weeks at the school. They elect officers and have lessons on the preparation of the soil, planting, seeding and watering. For the sponsors it will be an inspiration to see one hundred or more gardens all just alike, onions and beets in the center, bordered by carrots or marigolds. Teach the children that this is an investment; with 10 cents invested, and work, they have brot back $2 worth of vegetables and the girls have beautified many unsightly corners. But, most of all, the investment which cannot be evaluated is the comradship of mother and son, daddy and daughter and then, the lifelong interest in growing things.—Mrs. E. T. Michels.

Testing Program Inaugurated

One of the major results to come out of the South Dakota Federation of Garden Clubs is the plant testing organization which is now shaping up where we can announce it as actual fact. After weeks of work and study, and reams of correspondence with other plant testing associations and with the people who develop and originate new plants, we have worked out a system for our own state. Mr. Elton Shank, vice president of the Federation, has consented to be state plant testing chairman.

While the little news sheet, the Blizzard Belt Gardener, inaugurated in December of last year by the Federation, is a feature exclusively for the Federated Garden Club members, this new testing service will be available to all interested growers. This is because we realize that many of our best horticulturists cannot, for one reason or another, belong to a garden club. It will be a wonderful opportunity for us to test the hardiness, quality and usefulness of all the new and untried varieties of plants that are each year foisted upon buyers eagerly looking for something new. Mr. Donaldson and Mr. Shank have been contacting scores of seedsmen, plantsmen and hybridizers who would like to have their oginations tested under the climatic conditions of this territory. When seeds, plants and cuttings are offered for trial the testing chairman will act as a clearing house to allocate them to the folks who wish to try them out. Mr. Shank has been writing to prospective testers, but if you have not received a notice, and would like to enter the testing program just contact him at 215 South Medary Avenue, Brookings, S. D.

With the Federation taking this initiative, it is up to the recipient of the testing material to record results. Do not ask for plants if you are not interested enough to record the date of planting, progress and blooming. Soil conditions, cultural practices, winter preparation and care, weather conditions and idiosyncrasies, and results of it must be conscientiously recorded as the grower's share of the work. These reports are then sent to Mr. Shank before Nov. 1st each year who summarizes results which will be published for all to benefit. This is a grand chance to try out new things, and I am enthusiastic over the venture, and anxious to have gardeners in every corner of the territory take advantage of this opportunity. You do not need to be an expert horticulturist, but just be willing to keep notes on the results of your experiment. Specify what type of material you prefer to work with when writing to Mr. Shank. Victor Ries of the Ohio State College has already made arrangements to send cutings of many shrubs and plants from there, so we want to hear from you growers at once. Here's to your success!

Here's What They Did in January

South Sioux Club had talks on indoor bulbs, asparagus, and seed catalogues (with a good exhibit, I hope. We once had catalogues from every state in the union in addition to several from Africa, England, Holland, Switzerland, Denmark and Canada. Has anyone ever had a catalogue from Alaska?)

Flandreau's Green Fingers studied pruning in order to be able to do it properly before the sap starts running this spring; and had a roll call on garden resolutions for the coming season. Be-

sides this they heard a paper on herbs prepared by Mrs. F. M. McFarland that is strong in entertainment value for its interesting Biblical and historical lore. The new but practical uses to which she puts each herb makes me want to go right out and get some plants started. This paper is now on file for use of the clubs, though we may find space for it in the Gardener sometime.

Dell Rapids had a Triple V—Vegetable Ventures for Victory forum; and a review of the fascinating book, "My Friend the Rose, which is in your horticultural library. Ask Mr. Simmons about it.

In the Sioux Falls club the topics studied were the rose begonia, potatoes and landscaping. Evidently the group has made a success of free discussion by all members, for the president leads off, and everyone is supposed to express himself. Such a plan, as a rule, leads to a Tower of Babel effect, or else a tower of silence until the meeting is over, when the babble begins. It couldn't be used successfully in all clubs.

A garden dinner held at the College Greenhouse featured the Brookings meeting, and what do you think they ate? Four big tables groaned with the weight of food products which were all prepared from the harvest of the members' gardens. "If you can imagine the things that can be grown and be prepared in the best of style you will know how lucky thirty-nine people can be that love their gardens and eat from them," says Elton Shank. That ought to give the Victory gardens a real boost in Brookings. After the dinner colored slides were shown from five of the members' gardens.

Dell Rapids is in full swing with their annual bird house contest which will be held on March 15, early enough to permit the houses to be put in place before the arrival of the prospective tenants. Houses are to be judged according to a schedule suggested by the State Game Department as follows:

1. Practicality and correctness of dimensions, 50%.
2. Workmanship, 25%.
3. Originality, 25%.

The Better Homes and Gardens Club of Rapid City has made donations to the war fund; and sends flowers to the county home. The members of this club were greatly shocked and saddened by the sudden death of Marian Elizabeth Kellner, daughter of the club president, Mrs. Wm. F. Kellner, on January 11. Our most sincere sympathy goes to her family.

Following are just a few of the seventeen listed accomplishments of the Beach, N. D., Garden Study Club. This club filled kits for all the soldiers allotted to the group; donated $1 for Seeds for Britain; held a flower show of slides with admission charges from which over $8 was donated to the Red Cross; sponsored two other flower and vegetable shows; purchased a $25 War Bond; planted black walnut tree at various homes; and took care of the flower beds in the city park. The club has only twelve members, but I take off my hat to every individual in it!

Better morale boosters than pink spring bonnets are the new year books and letters we have received this month.

First attempts are often crude (how well I remember that first yearbook of Dell Rapids!) but there is nothing crude about the booklets made by two Sioux Falls garden clubs in their initial program making. Both are pocket-size and purse-proud so they may be carried handily for frequent reference to their typewritten pages. The feature of beauty of the Sioux Falls club is a near life-size pasque flower on the cover drawn by Mrs. Lucile Daugaard. So painstakingly is the pubescent nature of each stem sketched that it appears almost real.

The South Sioux booklet, with Mrs. J. Berghorst as program chairman, creates the impression of formal printing though every page was typed by hand. Colorful decals (why didn't we think of that?) and bright gummed seals enliven its pages, while the gate on the cover invites you to explore within. Both these clubs suggest three topics for each meeting so the horticultural agenda is pretty well covered with asparagus in January to reminisences of it the following December. One vegetable, one flower, and one related gardening subject are studied at each session. South Sioux makes their program additionally attractive with little verses like this one:

Summertime in Dakota . . . .
"It sometimes takes two plantin's . . . .
sometimes more . . . .
but when the harvest comes,
it's worth waitin' for . . . .

Word has just been received of the formation of a new garden club at Yankton with the "very enthusiastic horticulturist" Rev. Tragett as president, according to George W. Gurney. More about them later.

Foxtail says: Nowadays we go to the drug store to get the vitamins we used to get from the food we used to get.—Prairie Farmer.

The Carnegie institution of Washington discovered that the heat of the desert does not penetrate the ground for more than two inches.—Collier's.

FRUIT TREE PRUNING IN SOUTH DAKOTA

By
S. A. McCrory

S. A. McCrory

At this season of year many questions regarding the pruning of fruit trees are received. Space would not permit a complete answer to this, but it appears timely to discuss the subject of pruning in general.

Pruning generally constitutes a major problem for the fruit-grower. Unlike many other orchard practices, the results of experimental methods of pruning are less conclusive. Since a number of years may be required to observe the full results of pruning, the problem becomes all the more uncertain and difficult.

With definite information lacking, it is only natural that different pruning systems are found in the same locality, and that they range from the most severe to no pruning at all.

The best place to study fruit tree pruning and training systems is in the most productive orchards. All the varietal characteristics of the tree must be carefully considered among the factors determining the amount and kind of pruning a tree should receive. A properly pruned tree cannot be expected to give the best results if other cultural practices are neglected. Cultivation and the use of fertilizer should be a part of the program.

There are two main objects of pruning a fruit tree: First, to alter the shape or form the framework; and second, to influence production and character of the fruit. Less important reasons for pruning are: to increase the vigor of old trees; to prevent the formation of weak crotches; to remove dead or injured wood; to remove crossing branches; and to establish a balance between top and root at planting time. The total yield of a pruned tree is not always greater than that of an unpruned tree; however, the quantity of first-grade fruit from a well-pruned tree will usually exceed that of a tree receiving no pruning. Sunshine has a marked influence on the color of fruit. A tree with branches so dense that the proper light cannot reach the center of the tree will produce poor quality fruit.

By training and pruning, a tree may be made to grow into different shapes of which three forms are generally recognized. They are: the open head or bush shape, the central leader, and the modified leader. Since growth habits differ with varieties it is well for the grower to become familiar with such habits and modify his pruning practices accordingly. In sections where climatic conditions are most favorable, the system of pruning used will largely depend upon the opinion and liking of the grower. If conditions for growth are less favorable, any pruning or training one can give a tree to help overcome the adverse conditions can be justified.

Open-Head Type. With the open head type of pruning, the main leader is suppressed by severe pruning when the tree is small. Conditions in South Dakota are such as to give the open-head or bush type of tree decided advantages over trees pruned to a different form. If the trunk of a tree is exposed to the sun's rays during late winter or early spring, the temperature on the exposed side will be materially increased. This drying influence plus the sudden change to a much lower night temperature often results in the drying and death of the bark. The injury is known as "sunscale." The lower the head the greater the shading of the trunk and as a result less sunscald injury and less damage from borers and fungous diseases which follow. Low-headed trees are not subjected to as much injury from strong winds and will stand straight. With a low-standing tree the pruning, spraying and harvesting processes are made easier. Some disadvantages are to be found with this type of tree. The lateral branches may be too close together, but partial correction may be had through careful selection during the early growth period.

Central-Leader Type. This form is the shape the tree would generally develop when no pruning is done. The central and top-most branch is allowed to gain ascendancy. More branches may be produced with better spacing up and down the trunk. While this is a strong tree, and one which gives a natural appearance, it does not lend itself well to conditions of South Dakota. A high-headed tree is subject to sunscald and may also be injured by the wind. As trees grown in South Dakota are subject to injury from both wind and sun, a central leader type tree should not be developed.

Modified Leader Type. The modified leader is one in which the central stem is allowed to grow but is suppressed from time to time by cutting it back. This tends to produce a tree less in height than the central lead type and with stronger crotches than the open headed type of tree. Such a tree should have as great a bearing surface as the central leader type and a better distribution of branches than the open head type of tree.

LIBERTY HYDE BAILEY

By

Dr. C. B. Waldron

Dr. C. B. Waldron

Dr. Liberty Hyde Bailey, whose portrait appears in this issue, is the most widely known living person in the feld of horticulture and economic botany today. The number and great range of his publications have brought him to the notice of everyone interested in the art and science of plant culture.

These publications cover a period of over half a century, the most widely known being the Cyclopedia of Horticulture, a comprehensive work of six large volumes, all supervised and largely written by himself.

As a taxonomist, working in so diverse fields as native American fruits and the difficult field of the wohle family of palms, he is a recognized authority.

During the time when Dr. Bailey was serving on the Country Life Commission, to which he had been appointed by President Theodore Roosevelt, he visited North Dakota. In company with a resident of Fargo, a Cornell man and one of the few then owning a car, we spent two or three days driving through the eastern part of the state. He was much impresed by the almost unequalled resources of the region, but expressed the opinion, not then generally recognized, that the single crop of wheat could not be an adequate basis for a successful agriculture.

The writer was privileged to take several terms of horticulture under Dr. Bailey, and to assist him is some of his research. On a visit to him later, when he was dean of the College of Agriculture of Cornell University, it was interesting to learn that this man of science had, almost single-handed, wrested from a reluctant legislature, largely of city men, the several hundred thousand dollars necessary to equip what has since continued to be one of the great agricultural institutions.

As plant growers and lovers, whatever our particular interests are, we will find that Dr. Bailey is already in the field with his knowledge and wisdom and that through him our efforts are made the more interesting and profitable.

Foxtail says: Sledge Wicup is plumb strong for the new currency system. It's so easy to throw a white cent into the collection plate and piously pretend it's a dime.—Prairie Farmer.

Hardy Lillies For Spring Planting

H. N. DYBVIG, COLTON, S. D.

•

AMABILE—Native of Korea and but recently introduced to cultivation, one of the easiest to grow. Blooms late in June, grenadine red. Flowering bulbs each 40c, large bulbs 75c. Plant 4 to 5 inches deep.

•

CERNUUM—This is a dainty little lily from Korea, very similar in form to Lilium Tenuifolium except that the flowers vary from pale pink to a lilac color, with deep purple spots. Plant 4 to 5 inches deep. Flowering size bulbs 75c each.

•

CONCOLOR—A native of China. The upright star-shaped flowers are a brilliant sealingwax red, height 18 inches, blooming in July. Very attractive and very hardy. Plant 3 to 4 inches deep. Flowering size bulbs 25c each, 6 for $1.

•

DAVIDI—Native of western China. A very satisfactory lily which should find a place in every collection. Color red, blooms late in fall, just before the Tiger lily blooms. Plant 4 to 6 inches deep. Large bulbs 75c each.

•

MAXWILL—A cross by F. L. Skinner of Canada and is really an outstanding lily. Grows to a height of 6 ft., often having 50 or more flowers to a stalk; one of the best we grow. Large bulbs $1 each.

•

SCOTTIAE—Another outstanding hybrid raised by Skinner of Canada. It has glossy dark green foliage, the flowers are of a bright orange color and face outward from the stem, 24 to 30 inches high. One of the real ones. Plant 4 to 5 inches deep. Large bulbs $1 each.

•

TENUIFOLIUM—Siberian Coral illy. A hardy and beautiful lily, having fragrant nodding flowers, petals refixed, of bright red color in June. Plant 3 to 4 inches deep. 20c each, 6 for 75c.

•

WILLMOTTIAE—A new lily, native of western China. A really glorified Coral lily, growing to a height of 6 to 7 ft., producing up to 125 flowers on a single stem. I would call it a Wonder Lily. Plant 6 to 8 inches deep. Large bulbs $1 each.

•

WILLMOTTIAE—Unicolor. A distinct variety of L. Willmottiae. Flowers are lighter in color and with few, if any spots. Also a very satisfactory lily. Plant 4 to 6 inches deep. Large bulbs $1 each.

•

We also have single and double Tiger Lilies in blooming size bulbs. 20c each, 6 for 75c.

•

All prices are prepaid on all orders amounting to $2 or more. Include 25c for postage and packing on smaller orders.

SCHOOL GARDENS

By

H. R. Woodward

H. R. Woodward

I was a science teacher in high school during the period known as World War I. I remember quite well having been placed in charge of what was then called the School Garden Army and in direct supervision of a local organization known as as the Boys Working Reserve. Conditions then were not a great deal different than they are during this present war, especially insofar as the necessity for food production and the participation in war activities by boys and girls is concerned. School gardens when successfully developed and carried to completion make a valuable contribution to the nation's food supply. They also furnish worthwhile projects around which educational programs can be built. The garden is an excellent place for the growing child to acquire a number of veluable experiences. Digging in the dirt is not a habit that has to be learned by most children and even the planting of seeds and watching the development of the new plant, caring for it and protecting it is somewhat instinctive with most children. From a purely pedigogical standpoint there is much of great value in a garden, and in thinking of gardens in this light, we may mean gardens that produce both vegetables and flowers.

Perhaps this year will see a need for gardens far greater than we have seen in the past two years and many adverse conditions may call for a greater amount of planting in order to equal the harvests of the past. Already the Department of Agriculture is predicting severe grasshopper infestations in many parts of the state and these predictions are not based on guesswork. There has been actual egg counts in the soil over representative sections of the State. The student aside from developing a knowledge of gardening and cultivation, some patience, persistence and other virtues, must match his wits with the above mentioned insects as well as others, along with blighting fungi, and out of the ordinary changes in weather.

Local school officials should plan the activities and select and assign certain teachers who will assume primary responsibility, especially teachers of agriculture and vocational home making. However, all teachers can take some part. Agriculture teachers can offer instruction in good production, conservation, storage, cultivation, materials, such as tools, seed, fertilizer, harvesting, spray and control of insects and pests. Homemaking teachers can handle the problems dealing with preservation for home use, serving, food values of the various types of vegetables and the economics involved in the growing and preservation of each type. Since there is so much interest in gardens a|t present, it would apear that schools should seek to guide this activity to a degree at least in in order to produce the most worthwhile results we should avoid mistakes often made such as plowing up lawns, cindertracks, clay banks and old baseball diamonds, and we should take into account the effect of shade trees and the enormous amount of food and moisture that their widespread root systems utilize.

Rural gardens may be promoted and county superintendents could arange vegetable shows in the fall. The produce of the gardens could be used by the children cooperating in the project. Probably rural pupils will need less guidance in these activities than those in cities and towns because they have lived continuously under gardening conditions. There is opportunity for cooperation between rural and town pupils where those living in town can furnish seed and fertilizer while those in the rural areas can furnish the land and mechanical power necessary for preparing the soil. The gardens can then be cared for by both. These activities should foster a rural-urban relationship that would carry over long after the gardens had been forgotten.

School gardens as I see them will when effectively planned should result in:

1. The proper training in carrying out worthwhile projects.
2. Making for better cooperation between town and rural students.
3. The production of much needed food.
4. A better understanding of nutritional values.
5. An improved diet.
6. Supplying indirectly an implement of war vital to our armed forces, our allies and our own civilian population.

Foxtail says: Some folks say a dog ain't got no soul nor no eye for beauty. But you never see a dog lay down anywhere else if there's a nice flower bed handy.—Prairie Farmer.

Dehydrated vegetables, chiefly for export to lend-lease countries and for armed forces overseas, should become common this year. There will be 187 new drying plants go into operation. Last year there were only 20.—Prairie Farmer.

PRESIDENT'S CORNER

By
H. J. Donaldson

H. J. Donaldson

Well folks, this marks the halfway point of this membership race, which winds up with the opening of the next convention. Sec. Simmons is leading the field with 13 annual and two life memberships, or 33 points; Francis Carlisle is second with 6 annuals and one life member or 12 points. In the first half of the year we have taken in a total of 38 new annual and four life members. That showing is nothing to brag about. If more of you folks will talk up the Society, we can easily double or triple that number in the last half of the year. I would consider it a job well done if I could say to the incoming President, at the next convention: "Here are 200 new members and there are twice that many more, waiting to get into the Society; go after them." The need for summarized, accurate, horticultural information is seen in two recent developments. 1st., the formation of the Prairie Canadian Society of Horticulture at Regina, Sask., with S. W. Edgecomb as President. Best wishes for success are extended to our Canadian neighbors and friends in their efforts to provide fuller knowledge of hardy plants and gardening for the northern country. 2nd., is the Federation Seed and Plant Testing Program, with Elton Shank, 215 S. Medary Ave., Brookings, S. D., as chairman. This program is not limited to Garden clubs only, but is open to any horticulturally minded person willing to test plants and keep a record of their development. If there are any Society members who are interested in building up our fund of information on hardy plants, trees, shrubs and fruits, they should drop a line to Mr. Shank at once for further details. Mrs. G. M. Jorgensen, Dell Rapids, S. D., Sec. of the Federation, has asked me to broadcast an appeal to our readers in North Dakota for locations of Garden clubs in that state. The sentiment here is strongly in favor of inviting those clubs to become part of the Federation. This cannot be done unless we know where they are. So if any of our North Dakota members know the whereabouts of Garden clubs around you, it would be highly appreciated if you would send Mrs. Jorgensen the names and addresses of the clubs or some of its officers. It means money in our treasury if all of our annual members keep on paying in a dollar a year, for 20 years, but think of the saving to the individual if they take out a life membership at the beginning. The cost is but $10 and regardless of the ups and down in the unseen future, you will have a paid up membership for life.

BOOK REVIEW

By
Mrs. F. Briley

Mrs. F. Briley

Shelter Trees in War and Peace, by E. Porter Felt, entomologist, published by Orange Judd Publishing Co. Inc., 15 E. 26th St., New York. Price $2.50.

Theodore Roosevelt said: "A people without children would face a hopeless future; a country without trees is almost as hopeless; forests which are so used that they cannot renew themselves will soon vanish, and with them all their benefits."

Ordinarily when we think of shelter trees, we have in mind trees to shelter from the elements, wind, cold etc., and South Dakota is familiar with the benefits of the Shelterbelt project. In this book the author deals with the planting of shelter trees from the standpoint of shelter from enemy fliers during bombing. He feels that the possibilities of shelter trees have been greatly underrated, and the reader feels the same way after reading this book. In it the situation as a whole has been pictured in the hope that the marked progress in some localities would stimulate others to appreciate what shelter trees can mean to the individual, to a community, and to the nation. Present conditions fully justify a detailed presentation of the shelter tree problem as a whole. Another objective of this book is to aid in saving trees that have been hastily planted around army bases, camps and defense plants. Helpful information in regard to the care of injured trees is given. Almost half of the book is given over to describing shelter or shade trees suitable to various sections of the U. S. South Dakota is given many suggestions—or did I just think so? The book contains 53 lovely illustrations. You will want to read this book if for no other reason than to broaden your point of view of Shelter Trees.

Foxtail says: Them Germans would have acted different toward this country, only they thought they'd just have the men of America to fight. They didn't know they'd have the women of America to fight, too.—Prairie Farmer.

GARDEN NOTES

By
W. E. H. Porter

W. E. H. Porter

Tho by virture of tradition and history we keep the feast of Thanksgiving in November, I always feel greater cause of rejoicing in March for once more the dark cold days of winter misery are past. However, it would be very ill-timed to complain about the exceptionally open, snowless conditions prevailing in mid-winter of 1943-44. Dec. 25th. Temp. 38 above, a green Christmas, cattle grazing after grass which is still green in hay meadow. New Year's eve, a midwinter calm prevails with cessation of recent tearing winds, with cloudless sky and day terp. of 30 above normal altho the long nights get rather cold. With my usual reprehensible carelessness I left some plants on an exposed window sill and, the fire going out during hours of slumber, some frost damage resulted with, I fear, total loss of that valued Mexican hen and chix Echeveria elegans, a Christmas fern tho completely flattened, recovered within an hour. In a message from Mr. Woodriff he advises a north window for Rex begonias and their hybrids, as direct sun causes serious leaf burn, which I have discovered thru trial and error. On the other hand my calla begonia revels in what winter sun filters thru a west window. Jan. 6th. Fifteen below zero, a still, penetrating cold makes us conscious of the coldest month of the year, altho the weather bureau's predicted snow squalls failed to materialize; scenically this snowless winter has its compensations, Hansen's Siberian rose continues the Christmas atmosphere with its countless bright red hips, larger and as numerous as holly berries. Under the heavy withered carpet of brown and russet grasses extends a green mat which the cattle eagerly discover and a filigree of bare branches relieves any bleakness from the vast sky sweep and yet not dense enough to obscure its ever changing colors. Winter's iron grip, unrestrained by the customary snow blanket, develops large, deep land cracks which reminds me of what a resident of India told, years ago, where prolonged heat and drought cause the same conditions with cracks large enough to conceal a hooded cobra. After a prolonged residence o n a prairie farm, we respond subconsciously to the fact that during the winter, nature establishes a state of siege and woe betide anyone who neglects their defense of health, fuel or shelter, for a remorseless foe awaits the opportunity to strike down its helpless victim. Among a flock of sparrows, feeding thru some flax straw closs to kitchen window, were some smaller birds which seemed to be the ruby crowned kinglet, the former were quarrelsome and kept chasing the kinglets. Jan. 13th. In absence of any snow our recent 20 below zero soon yielded to milder airs, today is sunny with temp. 45 above, stems of sweet-briar rose are bright green and ruby branching of Betty Bland has a plum blush; this bush is suckering in all directions. Unprotected, the herbaceous border looks forlorn, sedum acre, green as usual tho somewhat frost-blackened to shade of the yew and green also is the grass leaved buttercup R. gramineus, the only evergreen buttercup that I know of. Beautiful is silver gray branching of Alyssum florabundum, a woody shrublet resembling the creeping juniper, the best of the madworts carrying a summer long golden cloud. Linarias all show some green, especially faucicola, also Penstemon unilaeris, grey foliage of Veronica incana is only slightly curled and Daphne cneorum is unaffected. Tho withered, the pink thorn retains all its foliage. In current issue of **Newsweek** is an interesting item on their weird Australian creature half bird, half mammal known as the duck-billed platypus. Altho a hairy mammal, it has a duck's bill and lays eggs; a resident of Melburne who has a pair in captivity has found that the period of incubation is six days and at nine weeks it was still sightless and helpless but barking like a puppy. Jan. 20th. Our unprecedented mild weather continues unabated with day temp. in the forties, today 44, i. e. about 40% above normal, which causes one to speulate what conditions Nature will releave later on as a balance. The Christmas issue of **Manchester Guardian** has some interesting data on English winters; the snow of Christmas card tradition is a myth. Since 1840 there has been a fall of snow on Christmas eve only six times and on Christmas day 12 times and only about one Christmas in five has a temp. of freezing point or below, tho for a century before 1750 there was abnormally dry, cold weather. In late 17th and early 18th centuries when "the Thames froze for many weeks, Frost Fairs were held; the severe winter of 1683-4 the Thames was planted with booths in formal streets, all sorts of trades and shops furnished and full of commodities even to a printing press where the people and ladies took a fancy to have their names printed and the day and year set down when printed on the Thames." It seems that since that epoch there have been waves of

(Continued on Page 47)

PLAN NOW FOR YOUR GARDEN THIS SUMMER

By
Dr. L. C. Snyder

Dr. L. C. Snyder

Last summer over 110.000 gardens were planted in South Dakott. This shows that the people of the state have accepted the challenge to produce food at home. Since the number of gardens can increase but slightly, our problem is to produce better gardens in 1944. The first step toward a better garden is the preparation of a careful garden plan.

Decide on the Vegetables You Are Going to Plant

This will depend on the size of your garden and to a certain extent on the likes and dislikes of your family. The number of vegetables that can be profitably grown in a small garden will be fewer than for a large garden. In the small garden both the yield per unit of ground and the food value of the vegetable must be considered.

The following vegetables may be planted in the small backyard garden: snap beans, beets, broccoli, chard, cabbage, carrots, cauliflower, celery, kale, kohlrabi, lettuce, onions, peas (for fresh use), peppers, radish, spinach. tomatoes and turnips. If the garden is larger, lima beans, sweet corn, cucumbers, eggplant, melons, parsnips, peas (for canning or freezing), potatoes, pumpkins and squash should be included.

Avoid Planting To Much or Too Little

Certain vegetables are planted in excess of the needs of the family. This results in waste of seeds as well as valuable space that might be used for some other vegetable.- Some notable examples are too much lettuce, chard, snap beans, kale, kohlrabi, etc. On the other hand, gardeners frequently plant too little of some vegetables such as peas and sweet corn.

It is difficult to decide the exact length of row for each vegetable since the quantity needed will vary according to the number of vegetables grown. If a person grows several kinds of greens he will use less of each than if he grows but a single kind. The soil, weather and care will likewise affect the yield from a certain length of row.

For a family of five, the following row lengths are recommended for both summer and winter use:

Perennial vegetables
Asparagus—100 feet; rhubarb—50 feet.

Potherbs or Greens
Chard—20 feet; kale—20 feet; spinach—60 feet.

Salad Crops
Celery—30 feet; leaf lettuce—30 feet; parsley—10 feet.

Cole Crops (Cabbage and their allies)
Broccoli—50 feet; cabbage—100 feet; cauliflower—50 feet; kohlrabi—30 feet.

Root, Bulb and Tuber Crops (Edible parts below ground)
Beets—100 feet; carrots—100 feet; parsnips—50 feet; potato—500 feet; radish—25 feet; turnips—50 feet; rutabagas—50 feet.

Peas and Beans
Snap beans—100 feet; lima beans—100 feet; soy beans—50 feet; peas—200 feet.

Solanaceous fruits (tomato and related plants)
Eggplant—25 feet; pepper—25 feet; tomato—150 feet.

The Cucurbits (vine crops)
Cucumber—10 hills; melons—10 hills; pumpkin—5 hills; summer squash—5 hills; winter squash—10 hills.

Sweet Corn—400 feet.

Lengthen Your Garden Season by Succession Plantings

Avoid blank spaces in your garden by succession plantings. Several small plantings of such vegetables as snap beans, beets, carrots, sweet corn, lettuce, peas, radish, spinach and turnips will be much better than one large planting.

Plant Cool Weather Crops Early

Certain cool season crops such as kohlrabi, lettuce, onions, peas, early potatoes, radish, spinach and turnips should be planted as early as the ground can be worked in the spring or about April 15. In our experiments this summer, peas planted April 15 yielded twice as much as those planted May 15. Beets, chard, carrots, parsnips and late potatoes should follow in a few weeks or about the first of May. Well grown plants of broccoli, cabbage, cauliflower and celery should be set in the field about May 1.

Do Not Plant Warm Season Crops Too Early

Certain seeds require a warm soil to germinate and grow. This is true of beans, sweet corn, cucumbers, melons, and squash. About May 15 to June 1 is the proper time to plant the above vegetables. Snap beans can be planted a week or two earlier than lima beans. Well grown plants of tomatoes, peppers, and eggplant should be set in the field between May 20 and June 1.

Put Your Plan on Paper

Having decided on what, how much and when

(Continued on Page 47)

FRUIT AND VEGETABLE NOTES

By
F. X. Wallner

F. X. Wallner

The Glacier Orchard. I made three trips with Mr. Hilman Papst, one of our life members, now living in Portland, Ore., to his orchards 80 miles east of Portland, a short distance up the White Salmon river, in Washington State. This is an ideal place for fruit, just between Mt. Hood and Mt. Adams. Mt. Adams has an elevation of 12,307 feet but the orchards are in a valley much below the summit. There are about 5,000 bearing apple trees, mostly Yellow Newtons and Ortleys and the red Delicious and Spitzenburg. The English and Swedish market prefer the yellow Newton and Spitzenburg. Mr. Papst became a life member of our Society over 30 years ago, about the time our Dr. Hansen brot in blight resistant pear stock from Harbin, Menchuria and Mr. Papst's pear trees are on disease resistant root stocks, with Old Home trunks, and main branches top-worked to D'Anjou. The last 400 boxes of pears sold for $6.50 per box. Fredonia grape will be added this spring. The orchard proper consists of 200 acres and the 320 acres stock farm farther up the valley was sold while I was there. The manure from this farm was intended for the fruit trees. About 22 people, mostly women, were sorting and packing apples, the weekly pay roll about $750. Five carloads were shipped one week, netting about $2,280 each. The new storage house holds more than 36,000 boxes; a car holds about 756 boxes. There are three nice modern homes on the place for three head men, and I was near staying to occupy one, for next year. The White Salmon river runs thru the orchard and it is a popular stream for fishermen. Anyone that has the patience to go out on to the Portland lawns, exactly between 11 and 12 on a rainy night, can catch enough night crawlers the size and length of a pencil to fish for a week; this really was more sport than fishing. Mr. Papst drives out from Portland every week-end but spends three months during the summer with his family, on the fruit farm. Thirty years ago as president of the Pacific Gas & Coke Co., horticulture became his hobby; today at 75, a retired industrialist, but very much interested in fruit growing, he is carrying on a radical program in tree pruning, in that he will prune severely this winter, taking out much of the center and tops. He wants more fruit in the center of the tree, rather than using so many props to hold up the outside overloaded limbs. I made two trips to his home, out of Portland a short distance, where I got many rare plants to test out here at home; most will grow this summer, but may not survive the winter unless brot in or given protection.

(Continued from Page 38)

ticularly high in quality. All have proven valuable under favorable conditions. Late maturity may restrict their usefulness.

To improve potato conditions in Manitoba, more certified seed of suitable varieties must be grown and planted. Then this seed must be stored by the grower or some organization until spring, as that appears to be the only time the average gardener will buy. A progressive trend is toward the establishment of definite grade standards for all potatoes marketed in Manitoba.

(Continued from Page 45)

climatic change, alternating between mild and severe and since 1895 with erception of two winters, 1939-41 definitely milder with average temp. of 9 above freezing. In the same issue is an obituary notice of the well known 19th century socialist Robert Blatchford at the age of 92. Editor of the Clarion in 1895 he wrote Merrie England, a book that sold over two million copies, assuring him of world fame.

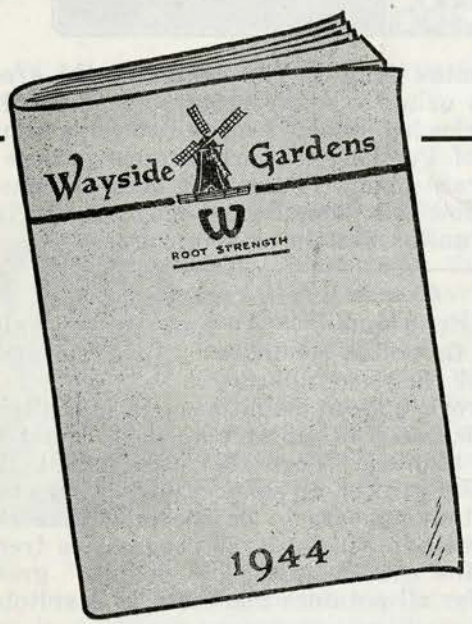
(Continued from Page 46)

to plant, plot your rows on a piece of paper. Measure your garden and outline it on paper using a definite scale such as 4 or 8 feet to the inch. Locate the perennial vegetables such as asparagus and rhubarb at one end of the garden so they will not interfere with future ground preparation. Group the early and late vegetables. Plant the sweet corn on the south and west sides to serve as a wind break. The vining melons and squash should be planted along one side so the vines can be trained along the edge of the garden. Indicate where succession plantings will go.

(Continued from Page 34)

The aggs are about two and three-fourths inches long, quite greenish in color.

Mr. A. C. Bent says the eggs of the American merganser are not easily mistaken for those of any other duck. The shell is thick, pale buff or ivory yellow. These are a little smaller than those of the other species. He considers 9 to 12 as the usual number. The American merganser seems to prefer hollow trees for nesting sites, but uses other cavities and sometimes nests on the ground.



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